Electricity on the Farm

A Monthly Magazine for the Progressive Rural Family

OCTOBER 1932

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(See Inside Back Cover for Details)

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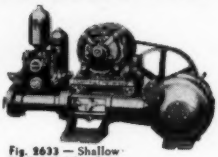

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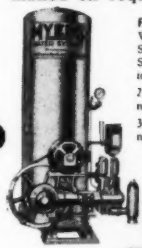

Fig. 2510—Shallow Well, Automatic, Self-Oiling Water Systems. Ready to install.

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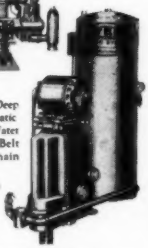

Fig. 2700 — Deep Well, Automatic Self-Oiling Water Systems V-Belt or Silent Chain drive.

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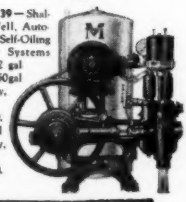

Fig. 2739 — Shallow Well, Automatic, Self-Oiling Water Systems with 12 gal tank. 250gal capacity, now **$77.00.** 340 gal capacity, now **$82.00.**

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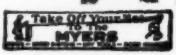

Electricity on the Farm

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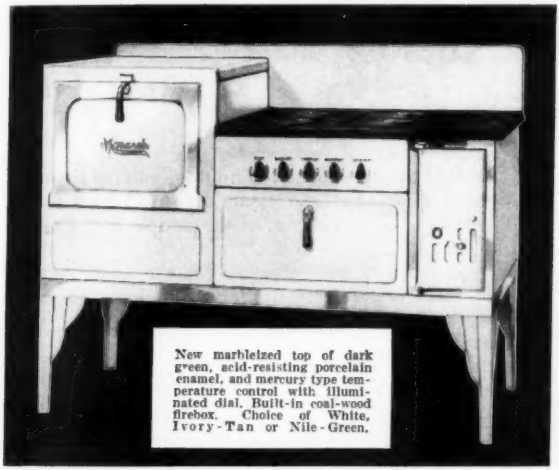
Capacity Cooking Equipment
FOR THE FARM HOME



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ADVERTISING BUILDS BUSINESS AND PROTECTS THE CONSUMER

ELECTRICITY ON THE FARM

OCTOBER, 1932

More Than Faith

Faith has been defined as "believing that which you cannot see." And yet it has been more than faith in what electricity might accomplish that has resulted in the electrification of nearly ten thousand farms the first six months of this year—a period in which industry in general has been retrenching at every turn.

Those who have used this modern form of farm power have been quick to recognize its ability to cut costs and incidentally reduce drudgery; they have been equally quick in singing its praise to neighbors. Such testimony from experienced users has in turn directed the attention of other progressive farmers to the essential part electricity is playing on the modern, efficiently managed farm.

Despite the difficulty in making farming pay in these times, there has been, nevertheless, nearly ten thousand who have had sufficient faith in electricity to go to the expense of installing it. But, as noted above, it has been more than faith. It has been the certain knowledge that electricity, properly used, pays for itself, eliminates a lot of toilsome labor and makes the farm a better place to live and a better place to raise the family. Nearly three-quarters of a million farms in this country alone now testify to the value and benefits of electricity by using it on an ever increasing scale.

BARN BREEZES

By ANDREW APPLEBY

IF you were to soak the walls, the sills, and the timbers inside your barn every day, you would expect the paint to soften, the plaster to crumble, and the wood to rot away. If you constantly moistened your hay and grain, even a little, you would expect the quality to suffer, and you would look for mold and mildew. If you fed this grain, you know you would get poor results and small returns.

But the average dairy cow gives off, in her breath and through her skin, over 5,000 pounds of water vapor in a year. In some cases this will equal her milk production. That means that the breath and perspiration of twenty cows shut up in a tight stable will add more than four eight gallon cans of water to the air every twenty-four hours. More than a barrel of water a day.

This brings destruction to the barn itself, and damage to the stored feed unless you do something to get the water out of the barn air. Rot from the inside is often more destructive than the weather.

Barn Warm and Dry.

This is one of the problems every man faces when he builds a dairy barn. When Peter Templeton built his new barn a year or so ago, he had the best engineering advice available to help him work it out. Then he took it,—and his barn is warm and dry all winter long.

It is a big barn, 120 feet long, I should say, with room for some three dozen cows and half a dozen horses, and with special pens for the calves along one side. He wanted it tight and warm for the mercury sometimes crawls right down into the thermometer bulb up where Mr. Templeton lives. So he had the doors made double thick and fitted with special care. He even put on good tight storm doors at both ends of the central driveway. He shut out the cold as much as possible by using double windows. Then he lined all four walls with a good half inch of insulating wall board nailed on the inner edges of the studding. All the joints come on the studding so there are no cracks. When that was well painted, he had walls that were perfectly smooth without any projections or obstructions, and that would save much of the heat given off by the cows.

Build to Reduce Heat Loss.

You know, a barn is not like a house. If a house is built so you can throw a cat through it, the heat losses through the walls can be made up by building a bigger fire and burning more fuel. But in an ordinary barn the only source of heat is the animals themselves. We say we build a barn to keep the cows warm, but really the cows keep the barn warm. Or they would, if, like Peter Templeton, we make walls that reduce the heat losses, and put in enough animals to fill the barn. For a house we figure on stoves or a furnace big enough to heat the space we need. But for the barn we must provide only the amount of space that the animals can keep comfortably warm and still have enough heat left over to carry off the gallons and gallons of water that they constantly add to the air.

Unless it was carried off, Peter Templeton knew that the barn moisture would defeat all his care in building. It would make his tightly fitted doors swell and bind. It would cause the insulation on

the walls to warp and buckle. Both by the absorption of water and by pulling away from the studs the insulating value of the wall board would be decreased. This would make the walls colder and cause the moisture to condense on them still more, making conditions constantly worse.

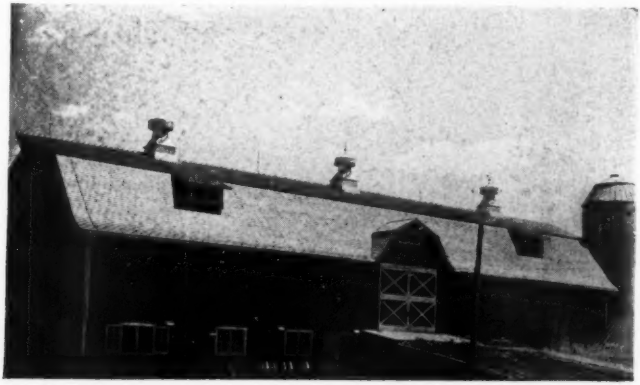
Except for one fortunate condition, it would be hopeless to try to keep the air in a barn wholesomely dry while twenty or thirty cows are each exhaling about two gallons of water into it every day. That condition is the fact that warm air will absorb and carry more water than cold air. We all know we can dry our mittens and socks quicker on the oven door than on the woodpile. That is why I said there must be some heat left over from keeping the stock warm to carry off the moisture of their breath.

When the outdoor temperature is zero and the air is 85% saturated, as it commonly is during January, it holds only about two-thirds of a pound of water in every 10,000 cubic feet. We say "the water is frozen out of the air" when it is that cold. But when you bring that same air into the barn and the cattle warm it to 60 degrees, it will hold ten times as much water without becoming over 85% saturated. Then when you draw that warm air off and let some more cold air in to mix thoroughly with the stable air, you will get rid of about three quarts of water. But of course, it takes some heat with it and the cows will have to warm the air that replaces it.

Keeping a barn at 60 degrees in zero weather is hardly practical, and is probably too warm for best results even if it could be done, but this shows what a difference the temperature makes in the moisture carrying capacity of the air. The warm barn wins both ways. First it can stand a greater air movement without getting too cold. Second it does not need so much air change to get rid of the moisture.

The Templeton System

In view of all these points, Mr. Templeton decided that he wanted a ventilation system that would take the water out of that new barn practically regardless of weather conditions. The manufacturers of his barn equipment told him that three small motor driven fans would do it, one for the horses, and two for the cows. In the cow barn, he put one on each side but not right across from



Mr. Templeton's fine new barn.

each other, instead about half way between the middle and the diagonally opposite corners.

Each fan is set right in the wall of the barn up close to the ceiling and discharges to the outside without any pipes or flues at all. On the outside there is a little hood for protection and the fan has a valve or shutter that opens when it is running and closes when it stops to prevent back drafts. But there are no ducts to lead air from various parts of the barn to the fan, nor to take it from near the floor. And there are no carefully made and heavily insulated flues cluttering up the haymow. The moist air goes right out through the wall by the shortest and most direct route.

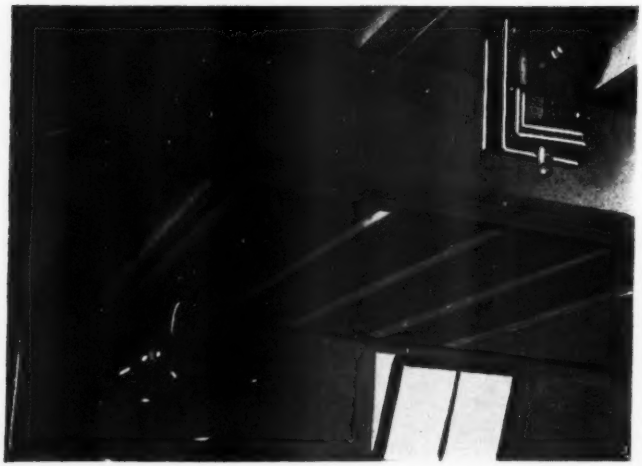
New Ideas in Ventilation

Taking the air from near the ceiling is against all the ideas of ventilation I was brought up on. I was taught that the air that had been breathed settled to the floor, so that was the place to draw off the moisture and the carbon dioxide. Besides, it is colder on the floor than near the ceiling so to keep the barn warm, we must remove the cold air and save the warm air. That is a very general theory, but there are some strong arguments against it.

Where does steam go when it escapes? Up. When it is cold enough so you can see your breath or a cow's breath, which way does it go? Up. Unless the air in the barn circulates enough so it is well mixed, the carbon dioxide and water from the cow's lungs will go to the ceiling. And because the air is warmer there a cubic foot of it will hold a lot more water than the cold air on the floor.

In this connection, Professor Fairbanks of Cornell points out that if the barn is tight and well insulated and contains enough animals to warm it, the air should circulate and become thoroughly mixed. Where there are few obstructions to hinder air movement this will actually occur. Under such conditions it makes little difference where the ventilators draw it off. If it is well mixed, a cubic foot from the side or center, the ceiling or the floor is about like any other cubic foot of air in the barn.

This uniform mixture is more



A switch and thermostat that controls a fan.

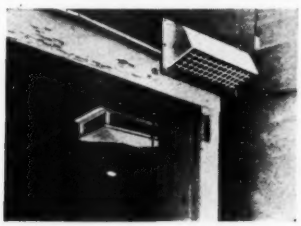
or less dependent on the fresh air inlets. There are, of course, a lot of old barns with holes and cracks enough to let in all the fresh air the animals need and sometimes quite a lot more. That may result in drafts. But it cannot give even distribution of the air and the regular circulation that is needed.

Mr. Templeton's intake flues are very simple and inexpensive, but they are well distributed throughout the barn. Each intake is a screened opening in the side of the barn just at ceiling height. Each has a little hood over it to keep out driving rain. The intake flues were made by nailing a strip of insulating wall board tightly across two adjacent joists. Most of them extend from the side of the barn to the center. There is a flat diffuser hung under each opening to prevent a direct down draft. All this is quite different from the old idea of natural draft inlets. They had to have a vertical section at the wall so the warmth of the barn would make the air rise and enter.

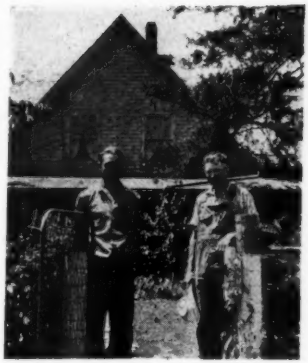
Intake Flue Area

But with Mr. Templeton's system a motor forces the air out and fresh air will come in to replace it, regardless of the temperature. Professor Fairbanks recommends that the intake flues have an area of at least 60 sq. in. That is each flue should be not smaller than 6″x10″, 5″x12″, or 4″x15″.

To avoid too strong a breeze from each intake there should be enough of them so that they can supply all the air needed without



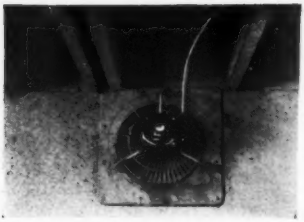
One of the intakes. This one discharges just inside the door.



This is Mr. Templeton himself, and Walter, one of his sons.

having it move along more than 300 feet a minute. At a velocity of 300 feet a minute a 6x10 flue will bring 7500 cubic feet of air into the barn every hour. Knowing how much air the fans will handle, it is easy to decide how many inlets are necessary. If a space between 2 haymow floor joists can be used for a flue, it will be a lot bigger than 60 sq. in. and will carry much more air. But for even distribution of the fresh air, it is better to have several medium size inlets than just a very few real big ones.

The brains of Mr. Templeton's system is the thermostatic control. In the circuit of each of the three little fan motors there is a sensitive thermostat. It is placed near the center of the barn, opposite the fan. When the fans are turned on they will run and draw the moisture out of the barn as long as the barn is comfortably warm. But just as soon as the part of the barn where the thermostat is begins to cool down too much, it shuts off the current and stops the fan. The other fans will continue to operate independently until the temperature around their thermostats drops below the point at which they are set to shut off. As soon as the temperature rises again, the thermostats start the fans without any attention.



One of the three flues that keep this barn dry.

By setting the different thermostats to act at slightly different temperatures it is possible to have at least one fan always going until there is danger of actual freezing in the barn, and thus take advantage of the fact that even a very little very cold air drawn into the stable will absorb and carry out a relatively large amount of water when it is warmed up to stable temperature. Then, when the weather is warmer and a greater air change is necessary, all of the fans can snap into the work.

Probably the best thing about mechanical ventilation is that it costs a great deal less to install than the natural draft system. For the same barns and furnished by the same manufacturers, the first cost is from one third to one-half as much as the older system. It is one of the few instances where the new way is not only better than the old, but also very much cheaper. Mr. Templeton told me that his system cost about $800 less than a gravity system from the same barn equipment company would have cost. To be sure the gravity system costs nothing to operate, but the motor drive is still cheaper in the long run.

The interest on $800 is $48.00 a year, or for a six month ventilating season, $8.00 a month. Mr. Templeton does not have a separate meter on his system, so he does not know just how much current it uses, but tests on other electric installations indicate that his barn should not take more than 500 kw. hrs. a year. The current would have to cost nearly 10c a kilowatt hour to make the running of the electric system equal to the interest charge alone on the money saved by putting it in.

This electrically operated hammer mill on the farm of W. T. McCray, Kentland, Indiana, grinds feed for approximately 600 head of cattle.

A New Way of

CURING SWEET POTATOES

By CHAS. E. SEITZ,
Professor of Agricultural Eng'g,
Virginia Polytechnic Institute

"WE consider this method of curing sweet potatoes as near perfect as we could ask for," states F. B. Eberwine, a prominent farmer of Nansemond County, Virginia, in a recent letter telling of his experience in curing sweet potatoes by electricity.

Continuing, Mr. Eberwine says, "We have visited many houses in Princess Anne County since we cured our potatoes and realize more than ever the value of electric curing over the wood or coal stove method. We consider ours the only house of really cured potatoes we have seen. Our potatoes were cured the same from top to bottom, both ends and the middle of the house. We have not seen another house where the bottom row of potatoes was cured. We consider the difference in cost is more than offset by the better quality of product, safety during cool snaps, and the convenience. With electric heat it is possible to store more potatoes, as no space is lost as is the case in stove heating. This one advantage will nearly pay the entire electric bill."

Old Method Unsatisfactory

Having had considerable experience in raising and curing sweet potatoes, Mr. Eberwine realized that the stove method of curing had many disadvantages, not the least of which were fire hazard, inconvenience, loss of storage space and imperfect curing. Upon the completion of the new 750 bushel sweet potato storage house, constructed according to plans furnished by the Agricultural Engineering Department, V. P. I. Extension Service, Mr. Eberwine decided to experiment with electric heat for curing.

Through the cooperation of Mr. E. H. Will, manager of the Suffolk Division of the Virginia Electric Power Company, he secured twelve, second-hand, 110 volt, street car heaters for the experiment. These heaters were connected in groups of three in series on 220 volts to give a low wattage, low temperature. The total connected load was approximately 4½ k.w. At each side of the house Mr. Eberwine located an automatic control, set to regulate the temperature within 3 degrees. Each control governed six heaters by operating a relay which turned the current on and off.

Heaters were set on pieces of tin on the floor and false flooring for potato crates built over the top of the heaters. Two extra heaters were used during the last five days to get additional heat. These two heaters were connected in series on

Interior view of storage house showing the two automatic temperature controls used for regulating heat.

220 volts and placed in the aisle between the two potato rows.

The current was turned on Sunday night, October 18, and the potatoes were put in the house the next night. From October 19 through October 24 the temperature was maintained at 80 degrees day and night. Then for the next five days extra heat was used to bring the temperature from 80 degrees to 82 degrees. The current was cut off the night of the 29th and the temperature reduced to 55 degrees, at which temperature the house was maintained to November 17.

During the ten day curing period 1,212 kwhrs. were consumed. From the end of curing period to November 17, 55 kwhrs. were consumed in maintaining temperature at 55 degrees. Warm weather during the curing period and since made the conditions very favorable. Indications are that slightly more heat will be necessary in cooler weather, but the same results could be secured at slightly increased cost.

Mr. Will, who with R. L. Ware, an assistant, made the electrical installations and readings, said in a recent letter:

"There is no question but the method we used in curing sweet potatoes by electricity is far superior to other methods that have been tried to our knowledge. While the cost may be slightly higher than the operation of wood or coal stoves, the results more than justify the difference, and complete profit figures would be in favor of electricity.

"This statement is prompted by the fact that approximately one hundred more bushels can be stored in the same house when electric heat is used. Conservatively figuring a profit of 50c a bushel, this could be an additional profit of $50, which we are confident would pay for the entire cost of electric heat. The big advantages in electric heat are the automatic feature and the close temperature range that can be maintained over the entire house, without any wide differences between crates of sweet potatoes, which naturally give more uniform and satisfactory results.

"Our experiment was somewhat abnormal due to the warm weather which we had during the period of curing. However, I do not think that the cost would be very much higher in cooler weather. From the experiments in the first house, I am sure that improvements can be made both in the type of electric heater and in the system of

Sweet potato storage house on F. B. Eberwine farm near Suffolk, Virginia, where experiment was conducted.

Type of old street car heaters used in curing sweet potatoes.

ventilators. We have come to the conclusion that small, low wattage, low temperature heating units of 6 Kw total capacity would be the proper size for 800 to 1,000 bushels storage. Our suggestion for ventilators would be longitudinal ventilators running the entire length of both sides of the house giving air under the crates in equal proportions regardless of whether the crate is in the middle or the corner. This would enable us better to place our heating units and secure slightly more efficient results. After the potatoes are cured, we would suggest the installation of ventilating fans in the top ventilator which would tend to keep the temperature down and circulate the air so that the warm air next to the roof would be drawn off and a more uniform temperature maintained.

"We hope that by the use of electric heat, potatoes can be cured without any damage regardless of climatic conditions and approximately 100 per cent finished product secured. Saving bottom tier potatoes from freezing will more than offset the cost of electric heat after the curing period.

"If turned on all of the time, 6 kw of heaters would use 144 kwhrs. a day. For a curing period of 14 days the most they could possibly use would be 2,016 kwhrs. Actual results would better this because the heaters do not run continuously. The storage period after the curing period would depend largely upon climatic conditions, and in all probability would run 500 kwh. a month.

"We would suggest building larger houses of approximately 1,-500 bushels from which a greater unit profit could be obtained and more efficient results secured from the electric heat. By utilizing ventilating systems such as we outlined, the length of the storage house could be increased to most any reasonable length. The width necessarily would be maintained due to storing, handling and heat distribution.

"We are quite confident that the actual results at the end of the season will justify the installation of electric heating apparatus, and that this method of curing sweet potatoes will be widespread in its application, not only saving the farmers many hours of extra work, but leaving a larger profit for their efforts and investment. The power company's work will benefit through the consumption of electricity, and at the same time such developments will make possible further rural electrification."

Of the vegetable crops, the sweet potato is second in importance, being exceeded in value only by the Irish potato. For the three year

(Continued on page 31)

Cleanliness pays dividends in

A CALIFORNIA DAIRY

By PAUL HOWARD

IF there be any truth in the old adage that cleanliness is next to godliness, then the Doyle Dairy at Dixon, California, is a very good dairy, indeed. This cleanliness was evident from the moment we started down the tree-lined gravel lane which leads past the ranch house sprawling comfortably on a clipped lawn dotted and bordered with flowers of purple and gold, crimson and yellow and blue. The barn yard was orderly and its raked hard-packed gravel surface invited a closer inspection of the buildings and the cattle.

The milking barn has the immaculate appearance of a stock show. The cement floors are scrubbed as clean as a ship's decks. Two hundred and forty Holstein cows in the Doyle barn at one time and every cow groomed until she fairly shines, every clipped tail a quiet appendage tipped with a brush as glossy as a silken tassel, every udder beautifully formed and glowing pink. Two hundred and forty black and white dairy cows and not a sound save the quiet hum of an electric clipping machine. Not a hoof stamped in irritation, not one animal thrashed restlessly at its manger. To any one who has heard the rattle of dry-caked hoofs stamping to shake off a swarm of flies, or the sharp clatter as a restless critter put her foot into the milking pail (to say nothing of the bombardment of justifiable profanity on the part of the milker), or the swish of a soggy tail as it whipped its stinging lash across the cheek, to anyone who has ever milked a cow at all this silence would seem remarkable. And it is. But on the Doyle ranch silence is taken as a matter of course. It is simply the logical result of a well organized plan. The cows are quiet because they are clean and well fed and calmly handled.

Half expectantly we looked for blue ribbons and every moment we anticipated hearing the distant strains of the hometown band.

Surely company was expected. But, we recalled, that we had come unannounced, that this was not a visiting day. In fact, it was a work-a-day in the middle of the week, very hot, and everyone was very busy. But country folk are as a rule more courteous than city people, and strangers though we be, we were shown around.

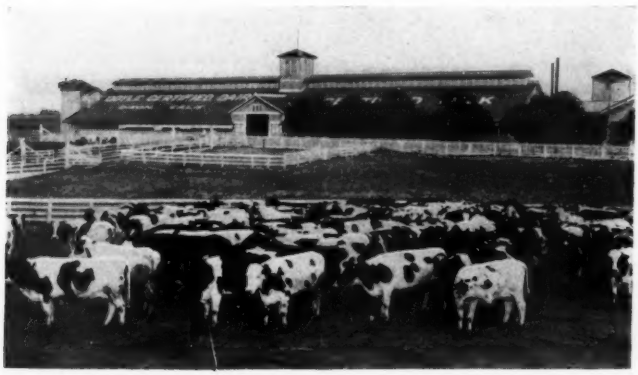
When Mr. Doyle asked if we would like a drink of fresh milk we eagerly said that we would. He led us to a screened porch off the bottling room and to a locker which the bottlers replenish from time to time. The milk we drank was a few minutes old. It was so cold we had to sip it, so good we drank a quart without even begging Mr. Doyle's pardon. Quite evidently, too, others enjoy drinking the milk, judging from the number of people who came to that little screened porch while we were there. A half-dozen milkers stopped to refresh themselves and a number of children from town came out on foot (we also saw three riding out on one groaning bicycle) to drink the milk that is kept in a locker and is free for those who come for it. And children, as any one who knows children will testify, do not drink milk because it is free.

As we stood chatting over our bottle we looked through a shining plate glass window and watched the bottling operations. When the milkers enter the receiving room (they are not allowed in the bottling room) they walk through a blast of air from an electric fan. This, we suppose, is for the purpose of discouraging any persistent itinerant fly who had not yet discovered that he would starve to death if he stayed long around the Doyle barns.

We ourselves did not enter the bottling room so clearly revealed to us through the glass window. One has to have a health certificate to do that and we did not have ours along. Every milker on the Doyle ranch has one, as has every one who in any way comes in contact with the milk. Even the cows. Each is tested and examined frequently by representatives of the State Medical Milk Commission. Each must be tuberculosis and abortion free.

Electricity Chills Milk

The milkers empty their pails into a sterile vat and the milk is run over a series of coils connected with an electric ice machine. The result is that in a few minutes after the milk has left the cow it is ice cold and bottled in sterilized glass containers. The bottling and capping is all done by



One of the barns of the Doyle Dairy Ranch and a portion of their herd of Holstein cows.

electrically driven machinery. Only two men are required to handle the one thousand gallons of milk bottled daily.

Dairying as the Doyles do it is big business. Their investment is tremendous. The home ranch employs around seventy men and is stocked with a thousand head of cattle. A great many fine cows must be sacrificed each year because they do not test up to the standard. This culling process is expensive. So, too, is this extraordinary cleanliness that is everywhere evident about the ranch. In order to survive under an arrangement of this kind the Doyles have developed a technique which eliminates expenses not absolutely necessary to the production of certified milk. They examine labor-saving devices and equipment to determine by experiment if they are practical.

Use Electricity Extensively

It is significant that a ranch so scientifically managed as the Doyle Dairy, electricity has been chosen as the handmaiden of efficiency and cleanliness. If it were cheaper or better to handle milk in any other way the Doyles would do it. They apply the same gruelling test to their electrical equipment as they do to every other piece of equipment on their ranch. They don't guess—they know.

In view of this, the equipment on the Doyle ranch has additional significance. Here we find electrical devices used in laboratory tests, electrically operated fans, ice machines, clipping machines, cutters and a battery of giant irrigation pumps. The power bill on the Doyle ranch is a considerable item, but it is an item that would not stand for a moment if these progressive dairymen did not know for certain that it is the cheapest and best way of doing their particular job. No one looking over the ranch could help being impressed by the work electricity is called upon to do there and how efficiently it does it.

707,808 Farms Have Electric Service

ACCORDING to the latest figures released by the National Electric Light Association, 707,808 farms were connected to Power Company lines on June 30, 1932. On Jan. 1st it was estimated that 698,786 farms were receiving service, which means that 9,000 new farms have obtained during six months of this year.

On July 1st, 1931, 681,472 farms were using central station electric power. This shows that despite the depression extension of Power Company lines is continuing steadily.

Providing feed for a herd of one thousand cattle is a huge task, but this job, too, is accomplished in a scientific manner.

CEILING DRUMS

That herald lighting joy

MARY E. WEBBER
Home Lighting Specialist
Nela Park Engineering Department
General Electric Company
Cleveland

CAN you imagine a drum in your home without the accompaning rub-a-dub-dub? Probably not—especially if you have children, but none the less there *is* such a thing, and what's more, this particular kind of drum that we are talking about is accompanied by relaxation and restfulness as well as joy! A magic drum surely, you may think? Not at all. It is a simply fashioned "gadget," taking its form and name from the drum, which is planned to conceal any one of several varieties of lighting fixtures and to transform the quality of its lighting.

Dress Up Old Fixtures

It is the unusual "lady of the house" who can't find in either her hall, living room, or bedroom, a ceiling fixture which might be described as a pie-plate on the ceiling with a varying number of sockets either embedded in the "plate" or hung down from it by chains. They are usually unsightly affairs and what is even more disturbing at night, the lighting they produce is harsh, cold appearing, and even unkind to the eyes and nerves. This is so because the lamp bulbs are not often shaded with this type of fixtude, and once we have experienced the comfort and greater livableness of shaded light we want to hurry to replace, or at least fix up, any fixtures which worry our eyes with bare lamps. The "fixing" is an easy enough problem once we understand the requirements, and better still in these depression days, it's inexpensive.

The first step, in the case of the fixtures with the chain drops, is to take out the length of chain and raise the sockets and lamp bulbs to the ceiling plate, for we find as the lamps are raised, we obtain a greater spread of light in the room and a decreased harshness in shadows. When the fixture is to your liking, small shades on the individual lamp bulbs finish the trick (see the September issue, ELECTRICITY ON THE FARM), but when it is a horrid looking con-

Fig. 1—The thin parchment drum completely conceals the old fixture. At the same time it softens and greatly improves the lighting result.

traption the ceiling drum is the thing!

We need two wire rings 1 inch greater in diameter than the "plate" of the fixture, and since many of those found in halls and bedrooms are 10 inches we use for illustration an 11-inch drum. The bottom ring is plain and the top needs three small eyelets on the inner side (see Fig. 2) for attaching the finished drum to the ceiling. Like real drums these ceiling drums require very special material; in the latter case a white or nearly so very translucent parchmentized paper, one which allows a maximum of light to escape through it in order to lighten the whole room. (Sixty-watt lamps are needed unless there are more than two sockets, when 40-watt lamps usually prove sufficient.) If, incorrectly, a heavy, colorful parchment is used, it holds in and absorbs light uneconomically, and immediately our purpose in making a more satisfactory lighting unit is defeated. We must cut two separate pieces from the parchment; a circle to cover the bottom of the drum, which may be traced off from the lower ring, and a long strip cut ½-inch longer (the seam allowance) than the circumference of the ring for the sides. The depth of the side strip depends on the fixture depth, for the bottom of the drum must be at least 1½ inches below the lamp bulb to avoid its scorching from the heat of the bulb.

Since a pure white drum would produce a cold feeling light, it is preferable to color the drum slightly—and only on the outside—with oil paint. Tones of ivory, light yellow, or in the case of bedrooms a very pale pink, are suitable. As a warning, however, the color tone must be very pale in order to keep the parchment drum efficient as a light giver. The oil paint should be mixed with a small amount of turpentine and rubbed on in a circular motion with a small wad of cheesecloth. Borders, other line decorations, or conventional patterns prove interesting, although any decoration should be kept simple and small in area in order that it will not interfere with the desired light-giving qualities of the shade.

Use Yarn, Raffia or Leather for Lacing to Rings

The simplest method of attaching the parchment to the rings is by punching holes about ¼ inch in from the edge of the parchment and about ½ inch apart (Fig. 2) and lacing the two pieces together around the ring with yarn, raffia, or even leather. Although this is unquestionably the easiest method, the finished product has a much more finished and tailored appearance when edges are bound. The binding should, for easy application, be of a bias material about ⅝ inch wide and should be applied with invisible stitches on the right side. Two yards of binding are necessary for an 11-inch drum. Of course, before the binding can be applied the parchment

(*Continued on page* 34)

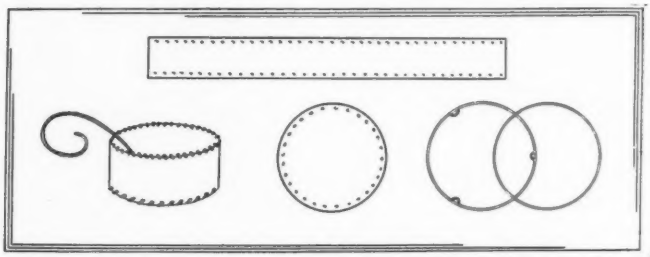


Fig. 2—The rings, the two pieces of parchment as cut, and the assembled drum as it appears when laced together.

Room Heaters

FOR AUTUMN DAYS

By ETHEL MORRISON-MARSDEN

THE first cool days of autumn strike us as a distinct change from the sultry days of late summer and although the relief from the heat is enjoyed, almost immediately we begin to wonder if we must start the furnace to take off the edge of cold and dampness. The electric heaters are most appreciated at this time of year for both labor and expense are saved by their use for it costs money to build a fire in the furnace. It is only for an hour or two, morning and evening that one needs heat to dispel the cold, damp atmosphere —the rest of the day the home keeps quite comfortable. And as I said before this is the time when the electric heater proves itself invaluable for it can, for this hour or two a day, be operated more economically than the furnace. A friend of mine with steam heat estimates that it costs her five dollars each time her fire is laid and kindled. And although it would cost more to heat an entire house by electricity for a matter of a day or a week than by stoves or furnace, still it costs far less to heat a portion of the home for a few hours in this manner than otherwise. The electric heater is far easier to control than the furnace once the heat has been established also.

Gaining in Popularity

Some years ago I read a statement to the effect that a new hotel was being erected in southern California, where the temperature, by means of electricity, was to be kept at a certain degree day and night, summer and winter. It was also predicted in that article that the time would come in the near future when all of our homes would be heated in winter by electricity and cooled in summer by it. At that time little of such possibilities was known to the public and it seemed like a fairy tale. A few days ago, however, in a western newspaper I read of a whole town in that part of the country that is planning through this coming winter to be heated electrically as an experiment and they were petitioning for heating rates which they were granted. The day is coming when electricity will be used extensively for heating purposes. At present the rates are not such that allow us to heat our entire homes for a matter of months in this manner—but doubtless in the future we will do this very thing, and at a less cost than its costs for coal or oil.

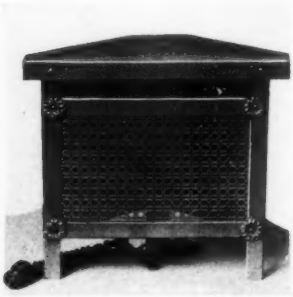
There are many, many times throughout the year when a small electric heater adds much to the comfort of a home. Screwed into a wall socket, attached for a few moments, the heater quickly dispels dampness and takes the chill off of a closed room. In brick or stone houses especially, when

This type of heater resembles in some respects a small radiator in appearance.

dampness clings, the electric heater does its work with gratifying results. There are countless cool evenings when the family sit about the radio, reading, sewing and talking, there are other times when guests drop in, that each and every household needs an electric heater to restore the temperature and make the rooms comfortable for all its occupants. At these times the family longs for anything that will take the chill from spring, summer and autumn days. Hardly a season passes without its wet spell, and here again our heater plays an important part.

Removes Chill Quickly

In bath rooms a heater is indispensable. Most farm homes are still heated with the old coal and wood stoves—half of the rooms are not reached by heat at all. The bathroom in such homes is generally tucked away in some obscure corner and is cold as a barn all winter. Bathing in this room takes on the nature of an icy plunge. Often the family sleeps in cold bedrooms and likes to dress in a warm bathroom. The heater attached for a few moments makes the room comfortable at all times for dressing or bathing. One may even sleep all winter with windows wide open and by closing them and turning on the heater for a few minutes (let the brave better half do this) have the bed room comfortable for dressing even in twenty degrees below zero weather.



The three-cornered or triangular type heater which can be placed in the corner of a room.

These heaters have one other use worth noting, especially in a farm home. Farm homes are, as we know, largely stove heated; there are many rooms only partially heated as a result. The heater therefore can be used in conjunction with the heating equipment you now have to keep your home comfortable. For instance, we use two stoves, one of which is the new type known as a parlor furnace. It heats very well, but the den, the little room I use for my writing, is a little apart from the other rooms so that I may be away from noise and interruption for my work and for this very reason, is a little apart from the heating circuit. Formerly I shivered with sweater or coat, in a half heated room as I pounded my typewriter on wintry days but now with my heater I am comfortable and happy even though a blizzard howls without as I work at my desk. As I have no cook stove in my kitchen, only my electric range, on a blustery morning I often feel the need of a litle extra warmth here and again the heater becomes my ally.

Two New Types of Heaters

There are two types of room heaters that I would recommend—the small round radiant heater we all know. They are very inexpensive and heat quickly. They are not hard to care for, the dust must be kept off and out of them, and although they do not last as long or give as good service as the more substantial type they are a good value for the money.

The other type of room heater is fast becoming more and more popular. It is a larger heater; it resembles in some respects a small radiator. They are built, some of them, like a piano bench with a seat on top; some of them, three cornered that will fit into the corner of a room quite out of the way. The sides are covered with cane panelling of metal that gives them a very artistic appearance, and they are finished in mahogany, walnut, or ivory tones to match

(Continued on page 34)

ELECTRICAL HOUSEKEEPING

Conducted by
GAIL MEREDITH

A Kitchen Combine

WHEN winter comes, the fact that all the heat of an electric range is used to cook the food, with none wasted for heating the room, is a problem for the housewife with a kitchen to heat. Or it was before they began doubling up on these ranges and gave us an electric range with a fire box for coal and wood, or a coal stove with electric cooking units, whichever way you prefer.

Now with these twin ranges she can heat her kitchen with wood and still have all of the convenience, accurate control, and cleanliness that electricity gives for cooking.

The combination is made in various ways. Some of the stoves have a fire box at the end of an electric range; some are the other way round, with electric units at the end of a wood range.

The former are the most common. These stoves are made with plain simple lines, with little to polish since all of the surface save the top of the fire box is enamel that washes like glass. The door to the ash box is wide so the box comes out easily and there is no excuse for scattering ashes about the floor. The drafts are conveniently placed and easy to operate.

Water Heating

Besides heating the room these stoves will heat water for sink and bathroom all year round with the installation of coils or a water front in the fire box.

In Bulletin No. 228 of the New Hampshire Experiment Station, Mr. Ackerman says of a combination range on one of the farms in his state:

"The wood burning section has four surface lids and also heats a standard size oven. Brass coils in the fire box provide hot water which is heated electrically when

This fine big range hurries up the cooking

Mrs. Schiller's home is the Blue Bird Tea Room

Mrs. Rosenberger and her spotless range

the fire is out, or in an emergency. Three surface burners and a separate oven are heated electrically."

Few of the new combination ranges have coal heated ovens. The cooking is done almost entirely by electricity. Slow soups are simmered on top of the stove, but the real business of getting a meal goes on with quick electric heat.

Best Investment Ever Made

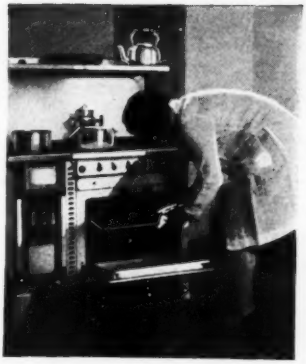
Mrs. Sallie Rosenberger of Hatfield, Pennsylvania, has a combination range that she has used for some time.

"Nearly six years ago," she writes, "my husband's parents bought an electric range. We are using it jointly, and we consider it the best investment we ever made. For many years our family has used every type of cook stove, but none of them ever gave us the complete satisfaction that our electric range does. There is always an element of danger connected with some, and always an uncertainty in results with others, but with an electric range there is always absolute safety, and as for the food, whether it is taken from the oven or the burners, it will always come out just right. Instructions for running the range are few, simple and easy to follow.

"When it comes to the cost of operating the electric range, I do not think there is another range that can be run so cheaply as our experience has been that more than half of the cooking is done with the electricity turned off.

"On the farm where duties are numerous, we find our cooking and baking problems simplified and there is practically no work connected with keeping the range clean. We feel that it has saved time, money, and work, and added greatly to our peace of mind."

At Charlton, Massachusetts, Mrs. Schiller runs the the Blue Bird Tea Room with the help of the big combination range shown in the picture. She, like Mrs. Rosenberger, has used all kinds of fuel for cooking, but thinks she can depend on electricity for the best baking and the most tasty foods. And that is what people want when they drop in at a country tea room, isn't it? Good baking and appetizing food. I do not see a sign before Mrs. Schiller's house Perhaps it is down by the road. I'd like to stop in there for dinner some day anyway.



This roomy farm range does not take up much room

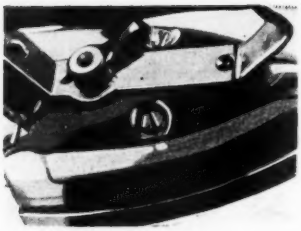
• • •

The New Smoothing Irons

IRONS have changed. They may look the same as you see them gleaming in a shop window. Or almost the same. Perhaps you do notice a knob here or a projection there that your old iron does not have, but probably you dismissed them as gadgets of no importance. If you did, you are wrong. Those little gadgets mark one of the important changes in irons. The other does not show when you look at them, but comes out plainly enough when you plug the iron in to go to work.

Heat control and heavier wattage distinguish the new irons.

No matter how you look at it, there were times when a 500 watt iron could not keep up with a good brisk ironer going over a heavy damp linen table cloth. Of course



The heat indicator

we could always slow down and let the iron heat up again, but sometimes we were in a hurry.

As soon as the irons with a thermostatic control for regulating the heat came on the market, we saw that there were times when the thermostat did not cut off, when the linens took the heat from the iron faster than the wattage of the iron replaced it. We were calling for all the heat that iron could supply, and, we suspected, just a little bit more.

When that fact became evident, the manufacturers said, "Well, here now. There is no reason why an iron should not supply all of the heat the best ironer demands of it. We have devised exact controls to keep the heat of the iron just where a woman wants it. We'll make an iron with twice as much capacity; then, no matter what she is ironing, she can set it low enough or get it hot enough."

So they put 1,000 watts in the hand irons, as much wattage as there is in some of the ironing machines. And just as they said, it is so delicately controlled that we can use little enough to heat our irons just warm enough for silk or sheer fine baby things, or we can call upon that reserve of heat to keep the iron up to temperature while we do a basket of heavy linen. The iron will stay as hot as we want, just as we have set the heat indicator, because of this reserve capacity.

These regulators, by the way, are not set for three definite heats. Since women do not all iron at the same speed, that would not satisfy us. They are graduated to give a wide range from very low to very hot indeed, and whatever we choose between.

This heat control offers more than guarded ironing. It is a great safety measure. Since the iron cannot keep on getting hotter and hotter, but stops short off when the indicated temperature is reached, it offers little or no danger of fire if you go off and leave it on.

We all have had the idea that the efficacy of an iron depends partly on its weight. This idea seems in a fair way to be discarded for three of the new irons this year are reducing. The lightest one weighs but three pounds. It is no toy either. Not by any means. I use one to iron a heavy white silk suit with pleats in the skirt. I iron it very much better than I used to with my old six pound iron, because I can set the heat control low enough to iron the silk without making it stiff and papery, or marring it here and there with a streak of scorch.

This iron is made of light aluminum alloy and finished with chromium plate that does not stain or tarnish. It has a thumb rest on the handle and generous big grooves on each side of the point to slide around all the buttons, so I can iron the cloth out smooth on every side.

A second iron, one that weighs

(*Continued on page* 31)

Here is the featherweight iron with the grooves for buttons

ONE out of THREE!

FROM the quiet, distant farm to the thundering, roaring city—from the cottage on Maple Street to the mansion on the hill—in every type of home everywhere—1 out of 3 electric refrigerators is a General Electric. Built by the world's greatest electrical manufacturing company, the famous Monitor Top mechanism has established a record for dependable, trouble-free service that is unmatched. General Electric Co., Electric Refrigeration Department, Section CZ10, Hanna Bulding, 1400 Euclid Avenue, Cleveland, Ohio.

GENERAL ELECTRIC

ALL-STEEL REFRIGERATOR

ON THE AIR

Conducted by
JEROME J. HENRY

Some Things He'll Never Forget

AMONG the things Norman Brokenshire claims he will never forget are applying for a job at "Broadcast Central" in New York nine years ago and being curtly told by the phone girl that no one was wanted:—then answering a blind ad in a newspaper that led to the same place and getting the job after pronouncing the names of foreign composers.

Another incident he will always remember is sticking a microphone out of the window when a program suddenly broke down, and announcing, "Ladies and gentlemen, the noises of New York."

Other occurrences the famous radio personality will remember are flying for eight hours out of sight of land over a stormy sea in an overloaded and rickety plane while searching in vain for the Graf Zeppelin; discussing the relative merits of blondes and brunettes with the engineer, later learning that the switch was open and the conversation was broadcast; fiddling with a key in the operator's control room and unwittingly tapping out an S.O.S. which threw the station off the air for two hours; and crawling under the table with a microphone at the Canadian Society's annual dinner because it was the only quiet place —and being kicked in the face by the toastmaster.

A record of the names of persons with the greatest number of broadcasting hours to their credit would doubtless include Vera Easkin, pianist. During her years of performance she has averaged six programs each day.

• • •

Hear the "Nubbins" Bang on November 10

STATE champion corn huskers will stage their battle for the national championship this year at Henry county, Illinois. The contest will be broadcast direct from the field over an extensive NBC network on Thursday, November 10. Plans for the contest have just been completed by the Midwest and Capper farm papers, the Henry County Farm Bureau, and the county community organizations.

Known all over the country as the greatest sporting event of agriculture, the contest attracts the best "shuckers" from Illinois, Indiana, Iowa, Nebraska, Minnesota, South Dakota, Kansas, and Ohio.

Each year the contest is held in a different state. Under this rotating plan, this year's contest will be the second held in Illinois. In 1926 Elmer Williams of Stark county, Illinois husked 35.6 bushels in the hour and 20 minutes allotted for the contest to establish a world's record that has not yet been broken.

During the contest and following the decision a complete account of

the event will be available to radio followers all over the United States. Even to the ears hitting against the bangboard, the noises and description of the unusual event will come into our homes.

Henry county is in the heart of the cornbelt. Favorable growing weather has prevailed and will undoubtedly assure the huskers a high yielding field where high records may be set.

• • •

Ben Bernie, the "Old Maestro" Back on the Air

BEN BERNIE, recognized as one of the foremost entertainers of the country, came back to the air a few weeks ago. This time he may be heard for a year over NBC associated stations under a continuing arrangement with his sponsors.

"The Old Maestro" has borne the reputation of being the premiere master of ceremonies among orchestra leaders. Under his contract, Bernie and "all the lads" will be heard every week on Tuesday evening over the NBC Red network of 40 stations.

In addition to his dry witticisms and "wise cracks" and his humorous observations on current events, he is known for the fact that he and his band have introduced many musical numbers that have become successes.

If one isn't too fussy about the precision of his rhymes, this performers' name might be linked with that of his instrument. Here's Tito Guizar with his guitar and the romantic garb of his native Mexico. He may be heard over CBS stations.

• • •

Countess Born in Spanish Castle

COUNTESS OLGA ALBANI, the lovely, dark haired girl with the blood of Spanish grandees in her veins, has flown from old world tradition to make a name for herself in the world of music through NBC networks.

Born in a castle overlooking the ancient city of Barcelona, the Countess has been overlooking the conventions that govern the activities of a Spanish noblewoman ever since. Concert soprano, radio star, musical comedy artist, screen actress, skilled fencer, first class cook and "A Number 1" poker

SHALLOW AND DEEP
WELL WATER SYSTEMS
TO FIT EVERY PURSE

Complete as low as $47.00 Write for Literature

ROPER

GEO. D. ROPER CORPORATION
430 Blackhawk Ave., Rockford, Ill.

How tubes have grown! This shows a comparison between the old and new tubes used in the 25,000-watt transmitter at station WBT, Charlotte, North Carolina, first super-power station in the South. The small tube was standard equipment in the original transmitter in 1921

player, Countess Olga Albani, whose title is authentic, might better pose for the typical portrait of the modern American girl.

Tradition would have had the young Countess grow up in her castle and in time marry some titled Spaniard. Her parents, however, decided to come to America when she was five years old. At first she was shielded from bustling America in a convent, but as she grew older found the seclusion not to her liking. There was nothing dormant about her desire to reach the stage, however, and hearing that a company was being assembled for a production she presented herself for an audition. Her personality and voice created a very favorable impression.

Almost as a matter of routine she had a radio audition, and the stage lost an engaging actress. Recently she gave up the intention of returning to the stage in order that she may devote all of her time to radio.

• • •

Some of the Things Stars Have Done

MANY of us would have enjoyed it if we had been present when Kate Smith, whose brand new car had been damaged by a trolley car in Washington, waited until the car's return trip to heave a brick through its windows; or when Morton Downey sang Irish songs in a cowboy costume to a Bronx theater audience and was promptly fired by the manager.

We would have enjoyed seeing Nat Brusiloff running the wrong way while playing in his high school football team; and Jack Denny, Senior, catching his young son leading an elephant down the main street of Greencastle, Indiana; or Howard Barlow serenading his best girl with a rusty bass trombone while the Denver neighbors called the police.

It would have been fun too, to see Mr. Boswell, just returned from a business trip, discovering that his daughters, Connie, Martha, and Vet had discarded their violins and cellos to play the saxophone, banjo, and "hot" piano; or to find a barber trying to sell J. C. Flippen, of the bushy haired Flippens, a tonic to prevent falling hair.

• • •

Many Aspirants Seek Radio Positions

THE radio bug seems to be as bad as the movie bug or suffering from being stage struck, according to radio officials who are

NEW WAY TO CHURN

Thousands are changing to this simple, convenient, modern way to churn. It's the famous DAZEY principle adapted to electrical operation. Ends the drudgery. Just turn the switch. Made in 2, 4, 6 and 10 gallon sizes. Write today for catalog and further information.

DAZEY CHURN AND MFG. CO., Dept. 27
Warne and Carter Avenues, ST. LOUIS, MO.

True, her stockings are a bit slack, but this damsel does have bewitching blonde locks. Queen of the studio for a night was Georgie Price. He's performing, as Benny Krueger and his orchestra.

flooded with applications for radio positions.

These applications come not only from young men and women and those caught in the tide of unemployment, but also from those who apparently hold good positions, but who have felt the lure of the air waves and feel that they will never be satisfied until they are "on the air."

From the presidents of companies on through salesmen, stenographers, and office boys come the applications.

New Smoothing Irons

(*Continued from page* 26)

half a pound more, has the same wattage and the same featherweight metal construction. A friend of mine tried this iron on several heavy pieces of linen, one a big Madeira lunch cloth with complicated embroidery. The ease of the ironing and the excellence of the results convinced her that it is the heat and not the weight that does the ironing.

The aluminum shoe heats very quickly, and, of course, 1,000 watts gives a big reserve to keep the heat up to the place you want it. This iron, like the former, can be set for varying temperatures.

The third iron has not reduced so much; it still weighs four and a half pounds. The wattage is 800 rather than 1,000, but this is a big advantage over the former wattage of 600.

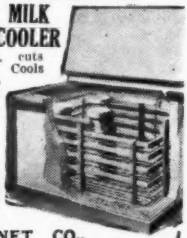
All of these irons are built with their own heelstand, so the motion of lifting them up to their stand is gone from the ironing job.

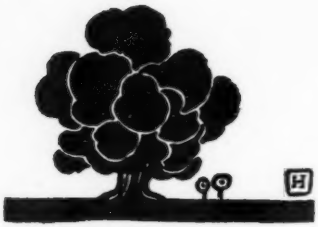
Curing Sweet Potatoes

(*Continued from page* 15)

period, 1929-1931, the United States average acreage in sweet potatoes was 691,300, with an average production of 60,510,000 bushels and an average annual value of $48,479,000. According to government authorities the storage of sweet potatoes is a sound economic practice which stabilizes this important industry and makes the crop available over the greater portion of the year.

Satisfactory storage is not only dependent upon sweet potatoes that are well matured and carefully handled, but they must be properly cured after being placed in the house and kept at a uniform temperature while in storage. The results secured by Mr. Eberwine indicate that electricity is a most satisfactory source of heat for curing the potatoes as well as maintaining the uniform temperature necessary for proper storage

ESCO
The Electric MILK COOLER
increases profits, cuts costs, saves labor. Cools milk quickly to below 50° and keeps it cold. A real money maker for you.
Send for Full Information
Ask also about ESCO Electric Sterilizers and Water Heaters.

ESCO CABINET CO.,
158 E. Market St., West Chester, Pa.



Under The CHESTNUT TREE

I Have a Car

I have a car—
It never skids,
It never breaks down,
It never gets a puncture,
It never gets overheated.
It never falters on steep grades,
It never gets in a collision or accidents.
I wish to goodness I could start it.

Fault

Red of face and seething with uncontrollable anger, young Mrs. Nuwedd dashed into the photographer's studio.

"Good morning, madam!" said Snappem, the proprietor, affably. "And what may I have the pleasure of doing for you?"

"Doing for me?" she echoed. "I don't ever want you to do anything for me. Look at this wedding group. It's shameful the way you took it. My poor husband looks just like an ape."

Snappem shrugged his shoulders helplessly.

"Indeed, madam, I regret that very much," he replied; "but you should have noticed that before you married him."

One automobilist asked another, "How much did you pay for that car, George?"

It was a very old and dilapidated car, and George answered gruffly, "I didn't pay anything for it. It was a present to me."

"George," said the first automobilist, "you've been robbed."

Misdirected Zeal

The two young men had adventured into the wilds, and what they lacked in experience they made up for in zeal. On their first night in the jungle the dismal howling of a wolf disturbed their rest. Presently Jones rose to his feet, seized his rifle, and said:

"Bet you an ounce of tobacco I kill that darned wolf!"

He trudged away into the darkness. Three hours later he returned, dragging a dead wolf. Smith grudgingly parted with an ounce of tobacco, and they settled down again.

Just before dawn another howl rent the air, and Smith nudged his companion.

"Give me that tobacco back! You killed the wrong one!"

Obliging

A young man from the country, walking along a city street, stopped in front of the fire station and looked in.

"D'ye have many fires in town?" he asked.

"Yes, we have them pretty often," replied the fireman.

"Ever try to see how quick you can get out?"

"Oh, yes!"

At that moment an alarm was sounded. At the first stroke of the gong the men rushed to their posts, the doors of the station opened, and within a few seconds men and engine were speeding down the street.

The young man watched the proceeding with admiration.

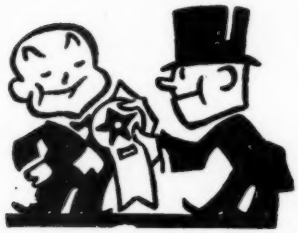
"Well," he exclaimed, "there ain't many places where they'd go to all that trouble to show a stranger what they can do!"

A Tale of Two Patches

A woman advertised for a man to work in her garden. Two men applied for the job. While she was interviewing them she noticed that her mother was making signs to her to choose the smaller. When the women were alone the daughter said: "Why did you signal me to choose the little man, mother? The other had a much better face."

"Face," exclaimed the mother. "When you pick a man to work in your garden you want to go by his trousers. If they're patched on the knees, you want him: if they're patched on the seat, you don't."—Lombard News-Letter.

DEPENDABLE
ELECTRIC EQUIPMENT



THE electrically-operated farm equipment and household appliances listed on this page have been tried and proven practical for farm service. The manufacturers who offer them are leaders in their respective lines and are in position to take the best possible care of your requirements.

Interesting and valuable bulletins can be obtained from these manufacturers without cost or obligation. Just write and say you read their advertisement in ELECTRICITY ON THE FARM.

For information about equipment not included in this list and the names of reliable manufacturers—use this handy coupon.

See Page

Electric Ranges
Edison G-E Appliance Co. 2
Malleable Iron Range Co. 5

Refrigerators
General Electric Company 27
Frigidaire Corporation

Water Systems
Myers & Bro. Co., F. E. 3
Roper Corp., Geo. D. 29
Cullman Wheel Co. 6
Ft. Wayne Eng. & Mfg. Co.

Water Heaters
Edison G-E Appliance Co. 2
Malleable Iron Range Co. 5
Esco Cabinet Company 31

Milk Cooling Equipment
Esco Cabinet Company 31
General Electric Company 27
Frigidaire Corporation

Farm Motors
Century Electric Company
General Electric Co.

Stationary Spray Pumps
Myers & Bro. Co., F. E. 3

Electric Incubators and Brooders
Oakes Manufacturing Co.

Electric Poultry Supplies
Oakes Manufacturing Co.

Churns
Dazey Churn & Mfg. Co. 30
Cherry-Burrell Corp.

Clipping Machines
Chicago Flexible Shaft Co.

Dairy Utensil Sterilizers
Esco Cabinet Company 31

TEAR OFF HERE

ELECTRICITY ON THE FARM, 24 W. 40th St., New York

Without cost to me, please have manufacturers send complete information on the following Electrically-Operated Equipment which I am thinking of buying:

....

....

My name is.....

Address .....

.....

I get my electricity from.....

Ceiling Drums

(*Continued from page 20*)

must be sewed with a simple overcast stitch to the rings.

To attach the completed drum

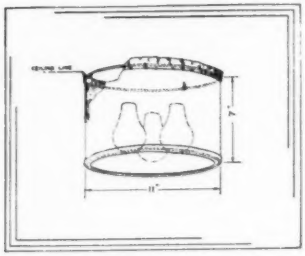


Fig. 3 — Illustrating one method of hanging the drum on three screw eyes placed in the ceiling. (For clarity in showing the suspension of the drum the fixture itself has been omitted from the drawing.)

to the ceiling, three small screw eyes may be placed in the ceiling, measured correctly to match the eyelets on the top ring. The eyelets then may be dropped into the hooks and the drum is secure. To avoid any leaking of light around the top of the drum, the top binding should be sewed so that it stands up like a collar around the top (see Fig. 3) instead of being turned and bound down over the ring.

Once the old fixture has been covered up and you experience the soft, comfortable lighting of your "new" ceiling fixture, you'll want to pull out a sure-enough drum and play a loud rub-a-dub-dub for joy at your own accomplishment.

Room Heaters

(*Continued from page 22*)

your furnishing. Truly this is a nice looking piece of furniture in any room. It is surprising how low the prices of these heaters all are. They are built so that they use low temperature heating units, assuring freedom from burnt out trouble. The corner type heater comes in sizes from 660 watts to 2000 watts and the larger type which resembles window seats, comes in 3000 to 5000 watt sizes, or 3 to 5 K.W. It is estimated that the average radiant heater consumes 1 K.W. in one and a half hours. It is a simple matter to figure what it will cost according to your own rates to operate any of these heaters for an hour or two a day, if you are skeptical. Suppose it does cost you ten cents for a couple of hours, how much heat could you produce from a furnace for ten cents?

Safety, comfort, the economic standpoint, the attractive appearance and the worthwhile investment of the electric room heaters are factors worthy of your consideration. The comfort of any family is always worth safeguarding. In a very short space of time every home with electricity will be equipped with a heater of some sort, for no home can afford not to own one.

Following Instructions

Traffic Cop: "You'll have to report at the police station madam. You were driving 50 miles an hour in town."

Fair Motorist: "But the man we bought the car from said we could go as fast as we wanted to after the first thousand miles and you see the speedometer shows 1,200."

"Funny, my razor doesn't cut at all."

'Don't be silly, dear. Your beard can't be tougher than the linoleum."

CLASSIFIED ADVERTISING

POULTRY RAISERS—RURAL SERVICE MEN. Write for free bulletin on ELECTRIC POULTRY Equipment, including Brooders, Incubators, Heating Thermostatic supplies for home made equipment. Lyon equipment is proven under all climatic conditions. Investigate. LYON ELECTRIC COMPANY, 2075 Moore St., San Diego, Calif.

CORRECTING AN ERROR

The correct street address for MIDNIGHT ALARM SYSTEM, whose advertisement appeared here in our September issue, is 2327 Chickasaw St., Cincinnati, Ohio.

A New Contest - More Prizes

This month a cash prize of $25 will be awarded for the best letter of less than 100 words on the subject: "How the magazine, ELECTRICITY ON THE FARM, has helped me."

In addition, there will be ten second prizes of $2.50 each for the next best letters. Letters need not be written in rhyme — just give a plain, simple statement of facts. In case of a tie, contestants will receive the full cash prize to which they are entitled.

The rules for this contest are:

(1) Write only on one side of the paper.

(2) Print name and address clearly at the end of your letter. Neatness as well as originality will be taken into consideration by the judges.

(3) Each member of the family may submit one letter.

(4) Letters must be mailed to Contest Editor, ELECTRICITY ON THE FARM, 24 W. 40th St., New York City, before November 1.

(5) Prize winners' names will be announced in our December issue and winning letters published in that and subsequent issues.

Winners of the August Cover Title Contest:

FIRST PRIZE—$25.00

"Harnessed power enjoying the results of a greater harnessed power."

Carlin Auckerman,
Austin, Colo.

THE following have been awarded $5.00 cash prizes for their August titles:

"The farm has no problem of wet or dry,
When electricity pumps the water supply."
Mrs. R. L. Constable,
Goodland, Indiana.

"Thanks for the water—it's cool and clean.
But we'd like to see, as well as be seen!"
Mrs. G. H. Pettengill,
R. 1, Orosi, Cal.

"Room for three with running water."
Gertrude Hamilton,
R. 2, Commerce, Texas.

"Room for three with running water."
Phebe D. Bunting,
R. 2, Oxford, Penna.

"A summer watering place."
Arthur B. Agg,
R. 3, Oxford, Penna.

August Front Cover

More Eggs

during winter months

● You can get more eggs and bigger profits during winter months by using your electric service. Electric lights in your poultry house will pay you good returns.

On an average winter day hens consume only enough food to maintain body weight and heat. Electric lights give them extra hours to feed and boost winter egg production—when prices are highest.

Full information on poultry house lighting, ultra-violet lamps and poultry water heaters can be obtained from your State Agricultural Experiment Station. Or write our Rural Service Department at our local office nearest you.

NORTHERN INDIANA PUBLIC SERVICE COMPANY

A Part of Your Community

356—J